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28. REDESCRIPTION OF *PHRYNICHUS PHIPSONI* POCOCK (FAMILY PHRYNICHIDAE: ARACHNIDA) COLLECTED AFTER 100 YEARS FROM NEW LOCATIONS IN MAHARASHTRA, WESTERN INDIA

(With fourteen text-figures)

Amblypygids are uncommon arachnids, with secretive habits and habitats. They generally occur in humid forest areas and rarely encroach human habitations. However, Gravely (1915) states "one species *Phrynichus lunatus* Poc. is not uncommonly met with in Bungalows in Sri Lanka". They are also known as scorpion-spiders because of the pedipalps appear as in scorpions. They look more like spiders and females carry their eggs in cocoons, attached to the ventral side of their body. So far there are six to seven named species of four oriental genera under two distinct families, namely Phrynichidae with broad cephalothoracic sternal plates and tarsus of the legs without pulvillus (Fig. 11). Whereas the second family Charontidae possess smaller cephalothoracic sternal plates and the three posterior tarsus of legs possess a prominent pulvillus. First leg is modified, anteniform and exceptionally long (Fig. 1).

Amblypygids are not authentically reported from India after Pocock 1894. The only known species are *Phrynichus phipsoni* Poc. (Family: Phrynichidae/Loc: Trivandrum, Kerala and Bombay, Maharashtra) and *Sarax sarawakensis* Thorell (Family: Charontidae/Loc: Table Island, Andaman, and also Singapore, Borneo, New-Guinea and Soloman Island). The specimens from Andaman were captured beneath stones at low water on the coast of Table Island, at all other places specimens were found in caves.

Recently, I collected three specimens from two different places in Western Ghats of district Sindhudurg, Maharashtra, i.e. Phonda and Amboli

ghats. These localities are about 600 to 800 km south of Bombay from where the earlier distribution and records are available (Pocock 1900). The fresh specimens were collected from under large stones at about 850 m elevation in totally wet soil. A single specimen collected from Borivli National Park, Bombay (donated to Arthropod Museum, Pune) happens to be the second record since Fauna of British India (1900). The third and most recent record is made from North Arcot district of Tamil Nadu (pers. comm. 1993, by Dr. (Mrs) T.J. Indra, Zoological Survey of India, S.R.S., Madras). The specimens collected from Sindhudurg district are redescribed and illustrated to update the description and illustrations for easy identification.

***Phrynichus phipsoni* Pocock** (Figs. 1-4)

1894. *Phrynichus phipsoni* Pocock. *Ann. Mag. Nat. Hist.*, 14 (6): 295.

1900. *Phrynichus phipsoni* Pocock. *Fauna Brit. India, Arachnida*: 127.

General: Body large to medium size, prominent with pseudo-pedipalps and the anteniform 1st pair of legs, much flat; cephalothorax truncated on anterior margin, wider than long, with two sets of outer tubercles, abdomen superficially segmented into 12 segments, last segment covers anal aperture. Coxae of 1st leg not visible ventrally, coxae of 3rd and 4th legs separated (Fig. 2), 2nd sternite possesses semicircular

genital lobes (Fig. 14).

Measurements: ♀ Total length 22.50 mm, cephalothorax 7.50 mm long, 13.50 mm wide, abdomen 15.00 mm long.

Carapace (Cephalothorax): Always wider than long with truncated anterior margin. Median posterior portion slightly raised and centrally deepened into a elongated central notch (Fig. 1). Entire surface rarely granular otherwise smooth with regular darker radiating stripes (Fig. 1). Median ocular tubercles almost on the sub-anterior margin, slightly raised, smooth and provided with a pair of median eyes (Fig. 3). A pair of lateral ocular tubercles situated on anterior lateral corner of carapace, smooth, slightly raised and provided with three pairs of eyes, smaller in size than median eyes (Fig. 3). Anterior, lateral and posterior margins smooth. Cephalothoracic sternum broad, superficially segmented into four parts (Fig. 2), continued anteriorly into thin elongated, tongue like process provided with a pair of long bristles (Fig. 9). Coxae of pedipalps and legs arranged radially round the sternum (Fig. 2). Pedipalp coxae broad, covered with short bristles, provided with 6-9 sharply pointed bristles arranged on inner margin, proximal to tubercle, bluntly tuberculate on anterior inner margin, armed with thick, short bristles on anterior margin while few longer bristles on outside, probably assisting while feeding (Fig. 9). Coxae of 1st pair of legs narrowed and raised under carapace, not easily marked ventrally. Coxae of 2nd to 4th pair of legs, broad and 3rd and 4th pairs widely separated (Fig. 2).

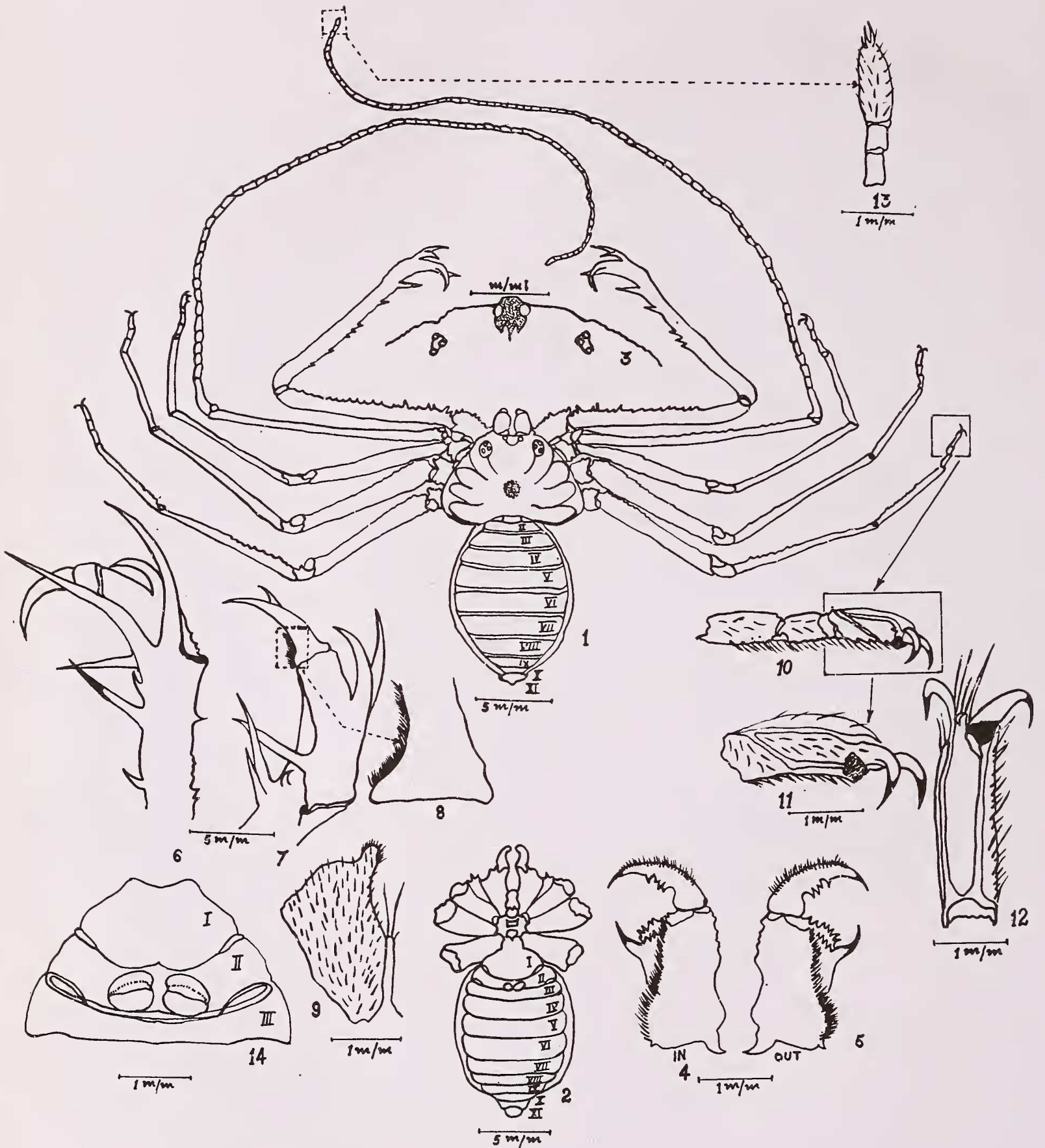
Chelicerae: Primitive, two segmented, semichelate, movable finger vertically operative, basal segment compressed laterally, surface smooth, clothed with a fringe of small, short, delicate bristles and hair (Figs. 4 & 5), clustered with many short, blunt to sharp group of teeth on ventral distal portion with single ventral large tooth (Figs. 4 & 5), movable finger almost $\frac{3}{4}$ the basal segment, sharply pointed distally, armed with four to five minute sharp teeth on interior margin (Figs. 4 & 5).

Pedipalps: Prehensile, subchelate, moving in horizontal plane, six segmented; trochanters as long as half the carapacial length, smooth, armed with short tubercles on exterior surface. Femur four and a half times as long as trochanter or twice as long as

carapace, slender armed with many spiniform tubercles on exterior surface. Tibiae almost as long as femur, few short spines on proximal portion both on outer and inner surface but strongly spined on distal end, ending into two apical spines (Fig. 6), one subapical spine, as long as half the apicals and one small, anteriorly curved, small spine in between inner apical and a subapical (Fig. 6). Hand, more flat than preceding segments, almost one third in length of either femora or tibiae or slightly less than half the carapacial length; armed with two strong spines one on each lateral surfaces (Fig. 7). Finger, the last segment, clawed, spined strongly, sharply pointed, shorter than hand but always longer than any of the spines on tibiae and hands, the proximal inner margin provided with a fringe of delicate, short bristles at the base only (Figs. 7 & 8).

Legs: Four pairs of legs, 1st pair always modified and anteniform, trochanters small, femora elongated, almost three times as long as carapace, thin, anterior or exterior margin minutely crenulated and entire surface covered with minute but obsolete sparsely spread granules, patellae one sixth of femora, tibiae modified and segmented into 29-30 small segments, tarsi also elongated, modified and subdivided into almost 20-25 small digits, apically ending into a elongated bulbous segment, apical tip provided with a pair of minute, delicate claw (Fig. 13), this perhaps helps as a tactile organ. Legs 2-4: with short trochanters, elongated femora and tibiae, entire surface covered with obsolete, sparsely spread granules but short patella, tarsi four segmented, and each provided with a distal claw (Figs. 10-12). The last digit of tarsi provided with some dorsal and lateral elongated sutures (figs. 10-12), proximal, elongated, tarsal digit provided below with a paired row of delicate but strong spines, three distal tarsal digits provided below with a row of delicate and minute spicules (Fig. 11). Pulvilli shrunk to a dark membranous structure (Fig. 11).

Abdomen: Oval, superficially segmented into 12 terga on dorsal and 11 sterna as ventral, all smooth, last one or two tergites form a flap on anal aperture (Figs. 1 & 2). First sternite enlarged, broad, narrowed anteriorly, 2nd and 3rd sternites provided each with a pair of lateral pulmonary apertures (Fig. 14), and a



Figs. 1-14. 1. Dorsal view of female *Phrynichus phipsoni* Pocock; 2. Ventral view of body, appendages omitted; 3. Dorsal view of anterior portion of carapace showing median and lateral eyes; 4. Lateral inner view of chelicera; 5. Lateral outer view of chelicera; 6. Dorsal view of anterior portion of pedipalp; 7. Ventral view of same; 8. Enlarged view of ventral proximal portion of finger; 9. Ventral view of pedipalp coxa and anterior portion of cephalothoracic sternum; 10. Lateral view of distal tarsal portion with claw; 11. Lateral view of last tarsal segment showing claw, pulvillus shrunken to black patch and delicate elongated sutures; 12. Dorsal view of last tarsal segment showing delicate sutures; 13. Dorsal view of distal tarsal portion of 1st leg; 14. Ventral view of abdominal sternites 1-3 showing lateral pulmonary apertures and a pair of genital lobes on sternite 3.

pair of semicircular lobes representing genital lobes on middle portion of 2nd sternite, open between 2nd and 3rd (Fig. 14).

Collection Data: 1. Loc: 30 km west of Amboli, in Amboli ghat, 820 m elevation, under large boulder and wet mud, dt. 19-9-1987, coll. Dr. D.B. Bastawade & party. 1 ♀ mature, 1 ♀ immature.

2. Loc: 18 km west of Radhanagari, in Phonda ghat, about 800 m elevation, under large boulder along the

roadside, dt. 10-9-1987, coll. Dr. D.B. Bastawade & party. 1 ♀ immature.

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29. *SIPHONODON CELASTRINEUS* GRIFF. (SIPHONODONTACEAE) - A RARE TREE FROM ORISSA

Siphonodon celastrineus Griff. (Siphonodontaceae), an interesting tree occurs in Simlipahar forests (Mayurbhanj district) of Orissa. Haines (Forest Flora of Chotanagpur, 1908 and Botany of Bihar and Orissa, 1921-1925) reported this species from Rajmahal hills of Bihar, but from Orissa this taxon has never been collected before. The species is known to occur sporadically in parts of Eastern India, Andamans, Sikkim, Bhutan, Myanmar, Philippines, Java and Thailand.

In the present collection from Gurguria,

Simlipahar (*Saxena & Brahmam* 4723, 5182 -RRL-B, in fruit 12-6-1982 and 19-10-1983), a population of only a few trees was noticed. The species can well be classified as Endangered in the status categories of IUCN's Red Data Book (1966).

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30. *ERYNGIUM FOETIDUM* LINN. (APIACEAE) - A NEW RECORD FOR BIHAR

The genus *Eryngium* Linn. with about 230 species (Mabberley 1987) is represented by 3 species in India, two are indigenous and confined between 1,650 m - 1,680 m in north western Himalayas, the third *E. foetidum* Linn. is a native of tropical America, now naturalised in some parts of India (Babu 1977). We recently collected *Eryngium foetidum* Linn. from Bhagalpur District of Bihar. Perusal of literature (Brassers 1951, Haines 1961 (Repr. ed.), Hooker 1879, Mooney 1950, Sinha 1987, Srivastawa 1964, Srivastawa 1986, Varma 1981) revealed that this taxon has not been reported earlier from any part of Bihar. The present note includes our

observations on its morphology, phenology, ecology, distribution and uses. The specimen cited is deposited in Bhagalpur University Herbarium and also introduced in the Botanical garden.

Eryngium foetidum Linn. Sp. Pl. 232. 1753; Burkill in Rec. Bot. Surv. Ind 10: 291. 1924.

Fl. & Fr.: March-July.

Locality: Dholbazza, a village situated about 30 km north of Bhagalpur town across the river Ganga (Bhagalpur District), Bihar.

Specimens examined: Dholbazza, N.N. Das 4300.

Ecology: In shaded alluvial soil near human